Amendments to Claims:

This listing of claims will replace all prior versions and listings of claims in the instant application:

Listing of Claims:

1. (Previously Presented) A method for timing recovery in an orthogonal frequency division multiplexing (OFDM) system, comprising the steps of:

detecting a lack of a synchronization symbol;

determining a timing offset from calculating the Average Group delay over a set of OFDM symbols by using a phasor to estimate an average delay of a multi-carrier modulation symbol, wherein the determining step uses the phasor to estimate the average delay of the multi-carrier modulation symbol by computing a differential phasor between each pair of adjacent OFDM subcarriers, removing QPSK data by rotating the differential phasor to a first quadrant, and computing an average phasor angle;

feeding back the timing offset to a demodulator; and

adjusting the symbol timing based on the Average Group Delay fed back to the demodulator.

2. (Previously Presented) The method of claim 1, wherein the step of determining the timing offset further comprises the step of determining a phase offset directly from the OFDM symbols using a discriminator in a feedback loop.

3. (Cancelled) ~~The method of claim 1, wherein the step of determining a phase offset comprises the step of using the phasor to estimate the average delay of the multi-carrier modulation symbol by computing a differential phasor between each pair of adjacent OFDM subcarriers, removing QPSK data by rotating the differential phasor to a first quadrant, and computing an average phasor angle.~~

4. (original) The method of claim 1, wherein the step of adjusting the symbol comprises the step of adjusting the symbol timing towards a target phase rotation.

5. (original) The method of claim 1, wherein the method further comprises the step of maintaining symbol synchronization without ever detecting the synchronization symbol.

6. (cancelled) ~~A method for timing recovery in an orthogonal frequency division multiplexing (OFDM) system, comprises:~~

~~detecting a negative phase in a OFDM modulated signal or detecting a lack of a synchronization symbol;~~

~~narrowing a search window for the synchronization symbol or determining a timing offset from calculating an Average Group delay over a set of OFDM symbols using a phasor to estimate an average delay of a multi-carrier modulation symbol~~ when detecting the lack of the ~~synchronization symbol; and~~

~~adjust timing to an earlier arriving signal detected by a synchronization symbol recovery detector or adjusting the symbol timing based on the Average Group Delay fed back to the demodulator.~~

7. (cancelled) ~~A method for timing recovery in an orthogonal frequency division multiplexing (OFDM) system, comprises:~~

~~detecting a negative phase or detecting a lack of a synchronization symbol and determining a timing offset from calculating an Average Group delay over a set of OFDM symbols using a phasor to estimate an average delay of a multi-carrier modulation symbol;~~

~~disabling a synchronization symbol recovery algorithm; and~~

~~adjusting the phase until a non negative phase is detected or adjusting the symbol timing based on the Average Group Delay fed back to the demodulator~~ when detecting the lack of the ~~synchronization symbol.~~

8. (Previously Presented) A digital receiver unit, comprising:

a receiver;

an orthogonal frequency division multiplexing demodulator; and

a processor coupled to the receiver and the demodulator, wherein the processor is programmed to:

detect a lack of a synchronization symbol;

determine a phase offset from a set of OFDM symbols using a phasor to estimate an average delay of a multi-carrier modulation symbol by computing a differential phasor between each pair of adjacent OFDM subcarriers, removing QPSK data by rotating the differential phasor to a first quadrant, and computing an average phasor angle;

feed back the phase offset to the demodulator; and

adjust the symbol timing based on the phase offset fed back to the demodulator.

9. (original) A digital receiver unit of claim 8, wherein the digital receiver unit further comprises a phase detector coupled to the processor, wherein the phase detector detect the phase offset.

10. (original) The digital receiver unit of claim 8, wherein the processor is further programmed to determine the phase offset directly from the OFDM symbols using a discriminator in a feedback loop.

11. (Cancelled) ~~The digital receiver unit of claim 8, wherein the processor is further programmed to determine the phase offset using the phasor to estimate the average delay of a multi-carrier modulation symbol by computing a differential phasor between each pair of adjacent OFDM subcarriers, removing QPSK data by rotating the differential phasor to a first quadrant, and computing an average phasor angle~~.

12. (original) The digital receiver unit of claim 8, wherein the processor is further programmed to adjusting the symbol timing towards a target phase rotation.

13. (original) The digital receiver unit of claim 8, wherein the processor is further programmed to maintain symbol synchronization without ever detecting the synchronization symbol and only using the phase offset.

14. (Previously Presented) The method of claim 1, wherein the angle of the phasor is an estimate of the Average Group Delay and is directly proportional to the timing offset.

15. (Previously Presented) The digital receiver unit of claim 8, wherein the angle of the phasor is an estimate of the Average Group Delay and is directly proportional to the timing offset.